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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/394,159	09/13/1999	FRED S. MILLER	IL-10091	3835

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EXAMINER

CINTINS, IVARS C

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/28/2002

14

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/394,159

Applicant(s)

Miller et al.

Examiner

Ivars Cintins

Art Unit

1724



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on May 31, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-23 is/are pending in the application.
- 4a) Of the above, claim(s) 13-20 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-12, 21, and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- Certified copies of the priority documents have been received.
  - Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s).
- 4) ☐ Interview Summary (PTO-413) Paper No(s).
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The term "an index-matched to the thermal expansion of glass" (claim 23, line 2) is vague, and indefinite as to the limitation intended.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Hotaling et al. (U.S. Patent No. 5,470,612). The reference discloses a metal mesh substrate (col. 6, lines 30-35) coated with a thin layer of an inorganic or organic aerogel (col. 6, lines 19-26); and this is all that is required by claims 1 and 3.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hotaling et al. The reference discloses the claimed invention with the exception of the number and physical form of the aerogel coating. However, the exact number of coating layers, as well as their physical form, employed in the reference device are not seen to materially affect the overall operation of this reference device, or to produce any new and unexpected result; and are therefore deemed to be obvious matters of choice in design, insufficient to patentably distinguish the claims.

Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hotaling et al. in view of Applicant's admitted prior art. Hotaling et al. discloses the claimed invention with the exception of the composition of the metal substrate. Applicant has admitted that metals having the recited properties are known (see the paragraph beginning at line 7 on

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page 5 of the specification). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the admittedly known metal for the aluminum alloy of Hotaling et al., since this admittedly known metal is capable of supporting an aerogel material in substantially the same manner as the aluminum alloy mesh of Hotaling et al., to produce substantially the same results. Such substitution is deemed to be especially obvious in view of the teaching by Hotaling et al. that other metal mesh, besides aluminum alloy, can be employed in the disclosed device (see col. 6, lines 30-32).

Claims 1 and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miles et al. (U.S. Patent No. 4,335,017) in view of Hotaling et al. Miles et al. discloses a separation material comprising both a xerogel and an aerogel (see col. 9, lines 25-27). Accordingly, this primary reference discloses the claimed invention with the exception of the recited metal support. Hotaling et al. discloses supporting a separation material (see col. 7, lines 24-26) on a metal support of the type recited; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the composite separation material of Miles et al. with the metal support material of Hotaling et al., in order to facilitate

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handling of the composite separation material in this primary reference system.

Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miles et al. and Hotaling et al. as applied above, further in view of Applicant's admitted prior art. The modified primary reference discloses the claimed invention with the exception of the composition of the metal substrate. Applicant has admitted that metals having the recited properties are known; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the admittedly known metal for the aluminum alloy of the modified primary reference, since this admittedly known metal is capable of supporting a xerogel-aerogel material in substantially the same manner as the aluminum alloy mesh of the modified primary reference, to produce substantially the same results.

Applicant's arguments filed July 19, 2001 have been noted and carefully considered, but no longer appear to be relevant in view of the new grounds of rejection.

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is

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reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (703) 308-3840. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.


The fax phone numbers for this art unit are: (703) 872-9311 for "Official" faxes after Final Rejection; (703) 872-9310 for all other "Official" faxes; and (703) 872-9492 for "Draft" and other "Unofficial" faxes.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

  
**Ivars C. Cintins**  
**Primary Examiner**  
**Art Unit 1724**

I. Cintins  
August 25, 2002